

CEQA Appendix A

Revegetation Plan

Eagle Lake Sewage Ponds Project

Introduction

The EL Facility Project involves a 40-acre National Forest System parcel that is completely surrounded by private land. The 40-acre parcel is located approximately 20 miles northwest of Susanville, California and approximately 2 miles southwest of Eagle Lake on the Eagle Lake Ranger District of the Lassen NF. The project area is accessed via National Forest System Road (NFSR) 31N07 and located in T31N, R10E, Sec 21 of Lassen County

The Eagle Lake sewage ponds were lined in the 1980's and are beginning to deteriorate. The number of patches required to maintain functionality of the sewage treatment facility have increased considerably the past few years due to the age of the existing lining which has reached its life expectancy. Complete replacement of the liners is needed to prevent imminent large-scale failure of one or more of the ponds' linings..

The site clearing activities are needed to provide an area from which the borrow site could be established on NFS lands, and to make room for the expansion of the smaller evaporation pond. The available NFS lands are limited on the parcel. The 40-acre parcel is already highly developed by the existing sewage treatment facility, and using a borrow site adjacent to this facility would therefore restrict the disturbance caused by this project to a compact, contiguous area.

The Proposed Action is divided into phases which include site preparation, construction of a sludge drying bed, and then either pond expansion, pond reconstruction, or pond relining and finally site reclamation. . Land clearing activities that would require revegetation and soil stabilization post construction would include a borrow site, stockpile site, the perimeter of the sludge drying bed, and any temporary construction roads.

Where excavation is conducted for the construction of the borrow pit, sludge drying bed, stockpile site and new ponds the top soil would be removed and stockpiled. This material, if determined to be free of noxious weeds, would be re-spread over the sites to be revegetated.

Project Area

The natural environment of the project area consists of slopes that are generally less than 20 percent, with elevations ranging from approximately 5,393 feet to 5,420 feet. Uplands are covered by an eastside pine forest with very little understory. The uplands lead down to an altered seasonal wetland (Little Merrill Flats (Merrill) wetlands) and meadow, at the edge of which the existing Facility is located. The altered seasonal wetland and adjacent meadow occupies a basin nearly closed, except in its southeastern corner

where it is drained by Merrill Creek flowing northeast into Eagle Lake. Common wildlife species such as mule deer (*Odocoileus hemionus*), black bear (*Ursus americanus*), common raven (*Corvus corax*) and coyote (*Canis latrans*) inhabit the area. Water resources in this area consist of seasonal streams, seasonally saturated wetlands, and small depressional seasonal wetlands areas that are closely associated with seasonal runoff and that supports hydric soils and plant species of moist to wet, open flats.

As noted above the forested area is eastside pine with very little understory. Thinning would reduce stand density and encourage the growth of a more diverse understory. Due to the nature of the reclaimed soils the aim of this revegetation effort is to emphasize grasses and shrubs over trees. It is anticipated some natural seeding of trees would occur.

Revegetation

Seed mixes and shrub species and associated planting methods would be determined by the Forest Service Botanist and/or Ecologist as noted below. The following plan also specifies monitoring. The plan address procedures to evaluate the success of revegetation efforts, including recommended remediative action should initial revegetation efforts prove unsuccessful in some areas.

If prior to revegetation activities, new noxious weed infestations are identified in the stockpiled topsoil, which cannot be eliminated through hand-pulling or tarping, topsoil infested with these weeds would not be respread into impacted areas of the project.

Post construction sites within the project would be revegetated with locally adapted native plants. These areas include the borrow site, the perimeter of the sludge drying bed, the stockpile site, the berms surrounding the new ponds, and the temporary construction roads. Upon completion of the construction the cleared areas would have organic material and rocks (not considered to be boulders) backfilled over them, the stockpiled topsoil would be respread in these areas. An initial survey would be conducted on each site to determine the suitability for revegetation. The percent of each area that is practicable for revegetation in terms of exposed rock and depth of topsoil would be documented. Species to be planted would be determined at this time.

The areas to be revegetated would be covered at the time of revegetation with mulch, pine needles, or rice straw so that at least 50 percent of the soil would be covered, to reduce soil erosion and overland flow, and to maintain soil moisture. Fifty percent ground cover has been demonstrated to provide adequate cover for minimizing erosion, for allowing vegetative understory recovery and for minimizing fuel accumulation in thinning operations in the eastside pine ecotype. Mulch would be certified as weed-free. Tacifiers would not be used. Native grasses would be broadcast seeded at a rate of 20 pounds per acre. Shrub planting density (spacing) would be depend upon the species selected for planting.

The borrow site, stockpile site, and sludge drying bed perimeter would be seeded, with a variety of locally adapted native plants. These plants should provide food value to wildlife in the form of browse, fruits and seeds. Species selected for planting may include but not may not be limited to such plants as elderberry,

serviceberry, chokecherry, Scouler's willow, and native grasses. Any substitute locally-adapted plants would be similar or better than those listed plants at providing food value.

Newly constructed or reconstructed berms around the sewage ponds would be seeded with a mix of native grasses including but not limited to *Poa secunda*, one-sided bluegrass; *Elymus glaucus*, blue wild rye; and *Bromus carinatus*, California brome) to prevent wind and soil erosion. Any substitute locally-adapted plants would be similar or better than those listed plants at preventing wind and soil erosion

All temporary construction roads would be evaluated for possible scarification and , recontouring, and would be seeded, with a variety of locally adapted native plants and native grasses. Upon completion of the project areas that show signs of rutting would be scarified to a depth of 6 six inches. Scarified areas would be contoured and seeded with native vegetation.

Planting should be done in March-April (for disturbance that occurs during the winter and spring), and/or in October-November (for disturbance that occurs in the summer and fall) when there is sufficient soil moisture present.

Best Management Practices (BMPs) that would be implemented during the reclamation activities include:

- BMP 2-4 Stabilization of Slope Surfaces and Spoil Disposal Areas and
Objective: To minimize erosion from exposed cut slopes, fill slopes, and spoil disposal areas.
- BMP 2-27 Restoration of Borrow Pits:
Objective: To minimize sediment production from borrow pits and quarry sites.
- BMP 2-28 Surface Erosion Control at Facility Sites:
Objective: Reduce the amount of surface erosion taking place on developed sites and the amount of soil entering project area wetlands and streams.
- BMP 5.4 Revegetation of Surface Disturbed Areas
Objective: To protect water quality by minimizing soil erosion through the stabilizing influence of vegetation foliage and root network.

Monitoring:

Implementation monitoring would be in the form of documenting the extent of each area that was planted and/or seeded, the list of species used, the number of plants or pounds of seed used and the date of activity. The form of protection would also be documented.

A noxious weed survey would be conducted at the end of the growing season. If any new infestations are identified within the revegetated areas, the infestations would be evaluated, then dug up or pulled by hand.

Long term area monitoring plots would be established. Effectiveness monitoring would occur in years one, three and five. Year one would be used to establish a baseline. If monitoring indicates that revegetation has not provided the percent coverage desired, or plants have failed to establish, the affected area would be reseeded/planted as needed. At this time a determination would be made as to if a different species or method, or irrigation, is required. Also, it would be determined if sufficient interim cover exists to prevent soil erosion. If sufficient cover is not present additional weed-free mulch, pine needles, or rice straw would be re-applied.

Forensic monitoring would be conducted on the berm areas and temporary construction roads where the concern is soil stabilization. If signs of erosion and gullyng are noted, the source would be documented. Additional weed-free mulch or rice straw would be re-applied until vegetation has established. Gravel or rip rap would be used if revegetation is not successful.

Success Criteria

Revegetation success for the borrow site, stockpile and sludge drying bed perimeter would be measured in terms of an increasing trend of ground cover and forage density. The desired species diversity is a minimum of two different species present. Naturally seeded tree species would be included in this assessment.

Success for the berm areas and construction roads would be measured in terms of sufficient soil cover to ensure soil stabilization indicated by the absence of rilling and gullyng.